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Before the
Federal Communications Commission
Washington, D.C. 20554

JUN - 1 1998

FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

In the Matter of)	
)	
Federal-State Joint Board on)	CC Docket No. 96-45
Universal Service)	
)	
Forward-Looking Mechanism)	CC Docket No. 97-160
For High Cost Support For Non-Rural LECs)	(DA 98-848)

COMMENTS

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Date: June 1, 1998

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SUMMARY

In these comments, BellSouth addresses three issues raised in the Public Notice: depreciation, the costs inputs including the cost of installing outside plant and the revenues to be included in the benchmark.

Regarding the issue of depreciation, BellSouth concurs with the comments filed this same day by the Joint Sponsors of the Benchmark Cost Proxy Model and therefore does not feel it necessary to repeat those comments here. However, BellSouth provides the depreciation information concerning the economic lives and future net salvage percentages that the Commission should use in determining the costs of universal service in BellSouth's serving territories.

BellSouth recommends that the Commission use state specific cost input values instead of the national default values when applying them to the cost proxy model. BellSouth believes that using state specific cost input values will provide a more accurate way of determining the costs of universal service on a state by state basis because it will allow for cost differences based on terrain and density differences as well as the cost of facility installation which varies from region to region according to contractor placing costs. Using national defaults tends to equalize all areas' costs which seems to conflict with the purpose of a proxy cost model. BellSouth provides input values on structure costs, cable costs, utilization factors, terminal costs/feeder distribution interface costs, switching costs, interoffice transport, network interface device, support investment and expenses.

For revenues to be included and the level of the benchmark, BellSouth suggests that the Commission must be mindful of its parallel activities that are considering alternatives to the four-step methodologies adopted by the Commission to calculate universal service support. These activities will ultimately decide the appropriate level of revenues to be included in revenue and benchmark.

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COMMENTS

BellSouth Corporation, on behalf of itself and its affiliates ("BellSouth"), hereby submits its comments in response to the Public Notice released on May 4, 1998.¹

BellSouth endorses the comments filed by the Joint Sponsors of the Benchmark Proxy Cost Model.² In order to provide the Commission with additional and specific information, BellSouth, in these comments, addresses three issues raised in the Public Notice: depreciation, the cost inputs including the cost of installing outside plant and the revenues to be included in the benchmark.³

¹ "Common Carrier Bureau Request Further Comment On Selected Issues Regarding The Forward-Looking Economic Cost Mechanism For Universal Service Support," *Public Notice*, DA 98-848, released May 4, 1998 (hereinafter "Public Notice").

² BellSouth Telecommunications Inc., a wholly owned subsidiary of BellSouth Corporation, is one of the Joint Sponsors of the Benchmark Proxy Cost Model.

³ BellSouth is submitting input data for those states (Alabama, Florida, Georgia, Mississippi and Tennessee) whose state commissions have not yet adopted a proxy cost model for universal service support.

1. Depreciation

BellSouth concurs in the comments regarding depreciation filed by the Joint Sponsors of the Benchmark Cost Proxy Model. Accordingly, BellSouth will not repeat those comments here. Instead, BellSouth submits specific depreciation information that BellSouth recommends that the Commission use as input to the cost model when determining the costs of universal service in BellSouth's serving territories

The economic lives and future net salvage percentages used to calculate BellSouth's universal service costs were developed by performing detailed depreciation studies, such as those that have traditionally been filed with the FCC. The sources of the lives used in these cost studies are the 1995 and 1996 BellSouth Depreciation Studies, which are provided in Attachment 1. The lives used in the cost studies were determined by calculating a simple average of the proposed lives for the BellSouth states in these two studies.

The economic lives and future net salvage percentages that BellSouth recommends are:

**BellSouth's Depreciation Parameters
Appropriate for Calculating Universal Service Costs**

<u>Account Name</u>	<u>Account Number</u>	<u>Economic Life</u>	<u>Future Net Salvage %</u>
Motor Vehicles	2112	8.1	12
Special Purpose Vehicles	2114	7	0
Garage Work Equipment	2115	12	0
Other Work Equipment	2116	16.2	0
Buildings	2121	45	3
Furniture	2122	14.1	9
Office Support Equipment	2123.1	11.5	10
General Purpose Computers	2124	5	0
Digital Electronic Switching	2212	10	0
Circuit/DLC	2232.1	9.3	0
Poles	2411	34	-61
Aerial Metallic Cable	2421.1	14	-14

<u>Account Name</u>	<u>Account Number</u>	<u>Economic Life</u>	<u>Future Net Salvage %</u>
Aerial Fiber Cable	2421.2	20	-15
Underground Metallic Cable	2422.1	12	-17
Underground Fiber Cable	2422.2	20	-15
Buried Metallic Cable	2423.1	14	-9
Buried Fiber Cable	2423.2	20	-6
Conduit	2441	59	-8

2. Cost Inputs Including The Cost of Installing Outside Plant

BellSouth's recommended universal service cost study inputs determine the costs an efficient provider would incur in providing universal service in each of BellSouth's serving territories. While the Commission has suggested the use of a cost proxy model to determine the forward-looking costs of universal service, the inputs to a proxy model should, to the greatest extent possible, be company and state specific. National default input values, whether HAI defaults, BCPM defaults, or Dr. David Gabel's defaults based on Rural Utilities Service (RUS) data, are not appropriate for use in determining the costs of universal service. The cost of providing basic telecommunications service varies by state throughout the nation. While these cost variations are partially due to terrain and density differences, facility installation costs also produce cost differences. Facility installation costs fluctuate significantly from one serving area to another, due in large part to variations in contractor placing costs. Therefore, national default values are not reflective of the costs of providing service in BellSouth's serving territories. Additionally, since the purpose of a universal service cost proxy model is to determine the costs of providing service in rural, insular and high cost areas, it is illogical to use only national

average inputs which tend to equalize all areas' costs and which conflicts with the purpose of a proxy cost model.

A comparison between BellSouth's state-specific input values and the BCPM default values or the HAI default values clearly indicate that neither set of default values can accurately depict the costs expected to be incurred in BellSouth's operating territories. BellSouth's input values reflect forward-looking costs of a least cost, most efficient network. Only BellSouth's individual state specific input values, based on the experience and the expertise of providing quality telecommunications service in the high cost areas of each of the states in which BellSouth provides service, are appropriate for use in determining the cost of providing universal service in those territories.

Even though cost proxy models design a hypothetical network, the cost of that network should reflect real world characteristics. That is, it should reflect the costs that an efficient provider would experience in building and operating that network. The inputs used by BellSouth reflect the most accurate view of conditions and experiences that will occur in providing universal service in the BellSouth territory.

The input values that BellSouth recommends here for universal service cost studies are the same inputs proposed in state Universal Service proceedings. Furthermore, the proposed input values are consistent with the input values used to develop BellSouth's proposed unbundled network element ("UNE") costs in each of its operating territories.

In developing the BCPM 3.1 inputs, BellSouth first analyzed the input requirements. Wherever possible, BellSouth-specific cost inputs, which reflect the forward-looking cost of providing service in BellSouth serving areas, are used. However, when BellSouth-specific data is

not available in the format, or at the level of detail, required by the BCPM 3.1, BellSouth Network experts reviewed the BCPM 3.1 default inputs. Certain of these defaults, when found to be representative of BellSouth's costs, are used. These input values include BellSouth specific costs for cable, structures, switches and other network components of universal service.

BellSouth recommends that the Commission use BellSouth's inputs to determine the cost of universal service for BellSouth's service territories. The recommended input values are provided in Attachment 2. Exhibit 1 provides summary level data for major input categories.

Some of the major categories of inputs using BellSouth-specific input values are:

- Contractor costs of placing cable, conduit and poles (structures)
- Sharing percentage associated with structures
- Cable material and labor unit costs
- Cable sizing/utilization
- Drop terminal cost
- Feeder/distribution interface costs
- Switch costs
- Interoffice transport
- Network interface device costs
- Expenses and support assets

All inputs recommended by BellSouth represent forward-looking costs. These inputs are based on current material prices, labor costs, and contractor costs that are adjusted by Telephone Plant Indices ("TPIs") to reflect 1997-1999 costs. In certain plant accounts, the TPIs add inflation estimates to the costs. In other accounts, the TPIs result in lower costs when costs are forecasted to decline in a particular type of telephone plant.

a. Structure Costs

BellSouth's structure placement costs (contractor costs) for placing conduit, trenching/plowing buried cable, and placing poles are based on an average of the existing

BellSouth contracts with outside plant contractors in each of the BellSouth operating territories. BellSouth also uses BellSouth state-specific inputs from these contracts for the costs for manholes and handholes.

BellSouth does not have data that identifies the percentage of time associated with each activity in the structure tables of BCPM 3.1. Therefore, BellSouth Network experts reviewed the BCPM 3.1 default values and found these values to be reasonable and representative of BellSouth's operations. Thus, BellSouth recommends these defaults for use in calculating universal service costs in BellSouth's serving areas.

BellSouth recommends structure-sharing percentages that are BellSouth state-specific values representative of BellSouth's projected amount of sharing.

b. Cable Costs

BellSouth recommends cable costs for both copper and fiber cable which reflect BellSouth state-specific cable costs. Material prices for copper and fiber cable are obtained from purchasing records reflecting BellSouth's actual purchase prices and are adjusted for inflation. Telephone company engineering and labor costs are derived from BellSouth's state-specific in-plant loading factors. These factors convert the material prices to an installed investment that includes material costs as well as installation labor, engineering, exempt material and sales tax (contractor costs are handled separately in the structures tables of BCPM 3.1). These factors are developed from actual BellSouth relationships of material costs to installation labor, engineering and vendor costs booked to each plant account. These state-specific factors are multiplied times the forward-looking material costs in BCPM 3.1 to develop the forward-looking installed investment consistent with the relationships of material to installed investment actually

experienced on BellSouth's books. BellSouth-specific cable costs reflect economies of scale and vendor prices that an efficient provider would expect to achieve on a going forward basis.

c. Utilization Factors

Universal service costs should be based on a forward-looking projection of actual utilization. BCPM 3.1 determines the network required to provide quality service to an area, calculates the cost of that network, and then determines a cost per line based on the number of lines served by the network. Thus, BCPM 3.1 uses an actual, or average, utilization to determine universal service costs. BCPM 3.1 requires a cable sizing factor input which, along with standard cable sizes and number of distribution pairs per housing unit, is used to determine cable requirements. BellSouth recommends cable sizing factors consistent with BellSouth engineering guidelines to determine cable sizes within BCPM 3.1. These cable sizing factors input by BellSouth produce a fill equal to the projection of actual fill, based on actual experience over time, for BellSouth.

d. Terminal Costs / Feeder Distribution Interface Costs

In BellSouth, drop terminal costs for line sizes below 100 pairs are included as exempt material in the cable accounts' in-plant factors used to develop the installed investments of cable. Therefore, terminal costs are not included in BellSouth's BCPM 3.1 study as a separate input. BellSouth recommends the use of BellSouth-specific feeder distribution interface costs. The material prices are obtained from procurement records and are adjusted for inflation. The engineering and labor costs are developed from BellSouth state-specific in-plant factors.

e. Switching Costs

BellSouth-specific analyses are used to provide the detailed data for wire centers in the state. State-specific information on calling rates, usage rates, loading factors and host/remote characteristics are used in the switch module of BCPM 3.1, along with company data and consistent line counts from other BCPM modules. ARMIS data is used where available for items such as percentages of traffic for residence, business, local and toll.

f. Interoffice Transport

Inputs used to calculate interoffice transport costs in BCPM 3.1 are BellSouth-specific values. These values include fill factors, SONET material prices, number of nodes on a ring, air-to-route factor, the mix of aerial, underground and buried fiber in the interoffice transport, and other inputs reflective of the costs of providing interoffice transport in the BellSouth territory.

g. Network Interface Device (NID)

BellSouth state-specific costs for the material, travel, and installation labor associated with the NID are appropriate. These costs represent the costs an efficient provider would expect to achieve on a going forward basis.

h. Support Investment

BellSouth developed BellSouth-specific support investment ratios for input into BCPM 3.1 based upon the relationship between projected investments in support assets relative to projected investments in non-support assets.

i. Expenses

Plant-specific expenses consist mainly of maintenance expenses. These types of expenses are considered to be causally related to investment and are developed from three years

of projected expense data relative to the same period projections for investment. The result is an expense per dollar of investment for these plant-specific expense accounts. The plant-specific expense percentages proposed are identical to those used in the unbundled network element cost studies.

Non-plant specific expenses, such as Network Operations and Executive and Planning, are not causally related to investment. These expenses are determined on a per line per month basis using projected forward-looking expenses and projected number of lines to derive BellSouth-specific expense per line.

3. Revenues To Be Included And Level Of The Benchmark

In the Public Notice, the Commission solicits comments regarding the revenues that should be included in calculating the benchmark that would be used to calculate federal high cost, universal service support. The Commission cannot specify a benchmark without first considering the overall purpose of high cost support. In its *Report to Congress*,⁴ the Commission made clear that its objective is to assure that each state receives no less than the same level of support that it currently receives from existing federal explicit and implicit mechanisms. At the same time the Commission is committed to making explicit the implicit support currently embedded in interstate access charges. In order to realize its goals, the Commission has begun a reassessment of the high cost plan that was articulated in the *Universal Service Order*.⁵

⁴ *In the Matter of Federal-State Joint Board on Universal Service, Report to Congress*, CC Docket No. 96-45 (FCC 98-67), released April 10, 1998 ("Report to Congress").

⁵ *In the Matter of Federal-State Joint Board on Universal Service, Report and Order*, CC Docket No. 96-45, 12 FCC Rcd 8776 (1997) ("Universal Service Order").

In response to the Commission's reassessment, BellSouth proposed a modification to the methodology for determining universal service support.⁶ BellSouth pointed out that the use of a nationwide average revenue benchmark coupled with an interstate support factor of 25 percent virtually guarantees that, for some states, the federal fund will be insufficient to maintain the level of support currently being received by the individual states. Thus, BellSouth proposed a methodology that identifies the existing implicit support reflected in interstate access charges by state. These interstate amounts, in addition to existing explicit high cost support, would be recovered through the federal fund and would be calculated on a state-by-state basis. The interstate portion of the high cost fund (expressed on a per line basis) would be deducted from the cost of providing universal service. The difference would be the adjusted cost of providing universal service. In order to provide additional support to individual states, BellSouth has recommended that the Commission establish a safety-net benchmark. The difference between the safety-net benchmark and the adjusted cost would also be funded through the federal universal service mechanism.

Thus, under BellSouth's methodology, the benchmark takes on a different role than originally conceived in the four-step methodology described in the *Universal Service Order*. Nevertheless, selection of a benchmark should proceed from the same starting point—namely the revenues associated with the services supported by the federal universal service fund. The difference between this starting point benchmark and the forward-looking cost of supported

⁶ See BellSouth's filings of April 27, 1998, May 15, 1998 and May 29, 1998 in CC Docket Nos. 96-45 and 97-160.

services defines the amount of support that must be made explicit and recovered through a combination of both state and federal universal service funds.

In the *Universal Service Order*, the Commission initially included within the scope of the revenue benchmark revenues associated with discretionary and access services. The Commission explained that the forward-looking cost models would not be able to differentiate between the costs of supported services and discretionary and access services and, therefore, the Commission believed it appropriate to include revenues from such services in the benchmark.⁷ The Commission's presumption that the forward-looking cost models would be unable to isolate the costs of supported services was incorrect. The cost models being considered by the Commission and the state commissions only estimate the costs of services that have been defined by the Commission as eligible for universal service support. Accordingly, the inclusion of any revenues from discretionary or access services in an estimate of the benchmark would understate the amount of support necessary to be funded through the state and federal universal service funds. Indeed, to include such revenues in the starting point benchmark would embed implicit support into the universal service mechanisms in direct contravention of the statute's requirements.⁸

⁷ *Id. Universal Service Order* at 8919.

⁸ The Commission mistakenly views that price/cost relationship of interstate access services should have some influence on the definition of the revenue benchmark. There is no question that prices of interstate access services are higher than they would otherwise be because of the implicit support currently reflected in such charges. Even if the Commission establishes a properly sized federal fund that recovers all of the implicit support currently included in interstate access charges, it does not necessarily follow that the price of access charges will be at incremental cost. Incremental cost represents a price floor, not a price ceiling. Such a cost does not take into account the contributions that are necessary to fund network development and (Footnote Continued)

While the difference between the starting point benchmark and the forward-looking cost of supported services bounds the total amount of universal service support that must be derived from state and federal mechanisms, the Commission of course must still establish the parameters of the federal fund. Proposed revisions to the Commission's four-step methodology are currently under review. As noted above, BellSouth's has proposed an approach that would make explicit all implicit support currently reflected in interstate access charges and provide support to the states in addition to what they receive today under existing implicit and explicit federal mechanisms. Such additional state support would be accomplished by defining a safety-net benchmark. The safety-net benchmark is a point (or points) between the starting-point benchmark and the adjusted cost of universal service that is to be selected by the Commission. The difference between the safety-net benchmark and the adjusted cost of universal service is additional universal service support for which the federal universal service fund would assume responsibility. Thus, to fully assess the impact of BellSouth's proposal and, indeed, any universal service methodology, it is imperative that the full scope of universal service support be defined through the establishment of an appropriate starting-point benchmark.

The Public Notice recognizes that the benchmark definition selected in the *Universal Service Order* no longer matches the proxy cost that the forward-looking cost models develop.

improvement projects and the new product development. The Telecommunications Act of 1996 directs that the Commission to encourage the deployment of advanced telecommunications capabilities that enable users "to originate and receive high-quality voice, data, graphics, and video telecommunications using any technology." (§ 706) Adherence to a mantra that price must equal incremental cost overlooks the chilling impact that such adherence has on investment and innovation.

To address the mismatch, the Public Notice flirts with the notion that the cost model should be adjusted to include the costs of other services included in the revenue benchmark definition. Changing the cost output of the model would be a serious misstep.⁹ No logical reason exists to include costs or revenues of non-supported services in a methodology that is supposed to be focused exclusively on universal service. Moreover, many state commissions have already adopted cost models that estimate the cost of supported services only. In accordance with the Commissions procedures, the state commissions will be submitting their determinations for review by the Commission at the same time comments on this Public Notice are filed. The Commission cannot now, by virtue of this Public Notice, abandon the basic underpinning of the Commission's charge to the state commissions—to select a model that estimates the forward-looking cost of universal service.

CONCLUSION

The Commission should adopt the BellSouth specific inputs provided with this filing. In addition, the Commission must coordinate its efforts here with other ongoing activities that are

⁹ Indeed, to modify a cost methodology to conform to a revenue benchmark definition would be the equivalent of the proverbial tail wagging the dog.

considering modifications to the four-step methodology for determining universal service support.

Respectfully submitted,

BELLSOUTH CORPORATION

By:

A handwritten signature in dark ink, appearing to read 'R. Q. M. Sutherland', written over a horizontal line.

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Date: June 1, 1998

EXHIBIT 1

BELLSOUTH BCPM 3.1 PROPOSED VALUES FOR SELECT MAJOR INPUT CATEGORIES

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Structure Unit Cost	1
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Expense Per Line	9
Financial Data	10
Tax Data	10
Cable Sizing	10
Miscellaneous	10

Note: BellSouth State Specific Inputs do not vary by Density.

STRUCTURE UNIT COST

	AL	KY	MS	TN	FL	GA
NORMAL&SOFT ROCK						
Conduit						
Trench & Backfill	\$ 11.31	\$ 6.80	\$ 5.94	\$ 6.23	\$ 6.99	\$ 7.10
Rocky Trench	\$ 11.31	\$ 6.80	\$ 5.94	\$ 6.23	\$ 6.99	\$ 7.10
Backhoe Trench	\$ 11.31	\$ 6.80	\$ 5.94	\$ 6.23	\$ 6.99	\$ 7.10
Hand Dig Trench	\$ 11.31	\$ 6.80	\$ 5.94	\$ 6.23	\$ 6.99	\$ 7.10
Boring	\$ 34.18	\$ 42.10	\$ 21.81	\$ 34.82	\$ 54.62	\$ 33.99
Cut & Restore Asphalt	\$ 17.08	\$ 11.47	\$ 10.26	\$ 9.18	\$ 10.52	\$ 11.29
Cut & Restore Concrete	\$ 18.53	\$ 14.72	\$ 14.60	\$ 12.12	\$ 12.65	\$ 13.05
Cut & Restore Sod	\$ 15.25	\$ 9.04	\$ 7.04	\$ 7.99	\$ 7.80	\$ 9.41
Buried Cable Installation						
Plow	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Rocky Plow	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Trench & Backfill	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Rocky Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Backhoe Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Hand Dig Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.79	\$ 2.80	\$ 2.56
Bore Cable	\$ 21.35	\$ 20.50	\$ 12.70	\$ 16.90	\$ 25.78	\$ 13.11
Push Pipe & Pull Cable	\$ 16.65	\$ 16.00	\$ 10.62	\$ 19.53	\$ 26.60	\$ 16.56
Cut & Restore Asphalt	\$ 8.27	\$ 7.37	\$ 6.59	\$ 5.66	\$ 6.21	\$ 6.64
Cut & Restore Concrete	\$ 9.68	\$ 10.54	\$ 10.82	\$ 8.51	\$ 8.28	\$ 8.36
Cut & Restore Sod	\$ 6.49	\$ 5.01	\$ 3.46	\$ 4.50	\$ 3.59	\$ 4.81
HARD ROCK						
Conduit						
Trench & Backfill	\$ 65.73	\$ 20.04	\$ 54.80	\$ 30.41	\$ 61.89	\$ 29.47
Rocky Trench	\$ 65.73	\$ 20.04	\$ 54.80	\$ 30.41	\$ 61.89	\$ 29.47
Backhoe Trench	\$ 65.73	\$ 20.04	\$ 54.80	\$ 30.41	\$ 61.89	\$ 29.47
Hand Dig Trench	\$ 65.73	\$ 20.04	\$ 54.80	\$ 30.41	\$ 61.89	\$ 29.47
Boring	\$ 34.18	\$ 21.05	\$ 21.81	\$ 34.82	\$ 54.62	\$ 33.99
Cut & Restore Asphalt	\$ 71.50	\$ 24.71	\$ 59.11	\$ 33.36	\$ 65.39	\$ 33.66
Cut & Restore Concrete	\$ 72.95	\$ 27.97	\$ 63.45	\$ 36.30	\$ 67.51	\$ 35.42
Cut & Restore Sod	\$ 69.67	\$ 22.29	\$ 55.90	\$ 32.16	\$ 62.69	\$ 31.78
Buried Cable Installation						
Plow	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Rocky Plow	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Trench & Backfill	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Rocky Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Backhoe Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Hand Dig Trench	\$ 2.65	\$ 2.82	\$ 2.39	\$ 2.80	\$ 2.80	\$ 2.56
Bore Cable	\$ 21.35	\$ 20.50	\$ 12.70	\$ 16.96	\$ 25.78	\$ 13.11
Push Pipe & Pull Cable	\$ 16.65	\$ 16.00	\$ 10.62	\$ 19.60	\$ 26.60	\$ 16.56
Cut & Restore Asphalt	\$ 8.27	\$ 7.37	\$ 6.59	\$ 5.68	\$ 6.21	\$ 6.64
Cut & Restore Concrete	\$ 9.68	\$ 10.54	\$ 10.82	\$ 8.54	\$ 8.28	\$ 8.36
Cut & Restore Sod	\$ 6.49	\$ 5.01	\$ 3.46	\$ 4.51	\$ 3.59	\$ 4.81
Poles						
Material Cost - Normal, Soft, Hard	\$ 275.69	\$ 268.19	\$ 226.79	\$ 230.22	\$ 231.40	\$ 227.32
Install Cost - Normal, Soft, Hard	\$ 173.81	\$ 186.47	\$ 158.06	\$ 207.89	\$ 212.80	\$ 191.46
Anchors and Guys						
Material Cost - Normal, Soft, Hard	\$ 26.33	\$ 26.33	\$ 26.33	\$ 26.33	\$ 26.33	\$ 26.33
Install Cost - Normal, Soft, Hard	\$ 85.35	\$ 88.39	\$ 73.95	\$ 87.32	\$ 67.07	\$ 79.63

PERCENTAGE SHARING ASSIGNED TO TELEPHONE

	AL Feeder	AL Distrib	KY Feeder	KY Distrib	MS Feeder	MS Distrib	TN Feeder	TN Distrib	FL Feeder	FL Distrib	GA Feeder	GA Distrib
Conduit												
Trench & Backfill	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Rocky Trench	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Backhoe Trench	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Hand Dig Trench	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Boring	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Cut & Restore Asphalt	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Cut & Restore Concrete	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Cut & Restore Sod	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%	99%
Buried Cable Installation												
Plow	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Rocky Plow	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Trench & Backfill	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Rocky Trench	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Backhoe Trench	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Hand Dig Trench	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Bore Cable	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Push Pipe & Pull Cable	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Cut & Restore Asphalt	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Cut & Restore Concrete	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Cut & Restore Sod	100%	100%	100%	90%	100%	100%	99%	97.0%	100%	98%	100%	86.67%
Poles												
Poles	37.26%	37.26%	47.97%	47.97%	28.35%	28.35%	35.14%	35.14%	40.27%	40.27%	26.42%	26.42%
Anchors and Guys	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

MANHOLES AND CONDUIT - Installed Cost

Normal - Manhole

	AL	KY	MS	TN	FL	GA
Handhole 3x5 or 4x6	\$ 1,613.75	\$ 1,608.73	\$ 1,156.90	\$ 1,561.03	\$ 1,344.91	\$ 1,455.05
Manhole 4x6x7	\$ -	\$ -	\$ 5,765.40	\$ 4,650.50	\$ 7,085.41	\$ 5,380.20
Manhold 12x6x7	\$ 7,169.64	\$ 8,284.08	\$ 15,741.88	\$ 8,332.05	\$ 10,160.52	\$ 6,830.18
Adder 12x6x7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Conduit Per Duct Foot	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41

Soft Rock - Manhole

Handhole 3x5 or 4x6	\$ 1,613.75	\$ 1,608.73	\$ 1,156.90	\$ 1,561.03	\$ 1,344.91	\$ 1,455.05
Manhole 4x6x7	\$ -	\$ -	\$ 5,765.40	\$ 4,650.50	\$ 7,085.41	\$ 5,380.20
Manhold 12x6x7	\$ 11,254.65	\$ 8,284.08	\$ 15,741.88	\$ 8,332.05	\$ 10,160.52	\$ 6,830.18
Adder 12x6x7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Conduit Per Duct Foot	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41

Hard Rock - Manhole

Handhole 3x5 or 4x6	\$ 2,167.14	\$ 1,767.64	\$ 1,595.29	\$ 1,754.46	\$ 1,784.06	\$ 1,634.01
Manhole 4x6x7	\$ -	\$ -	\$ 9,272.56	\$ 6,197.95	\$ 10,598.67	\$ 9,500.31
Manhold 12x6x7	\$ 20,790.80	\$ 11,621.17	\$ 24,948.19	\$ 12,394.13	\$ 19,382.82	\$ 13,086.74
Adder 12x6x7	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Conduit Per Duct Foot	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41	\$ 2.41

AERIAL COPPER
24 GAUGE Installed Cost

Size	AL	KY	MS	TN	FL	GA
4200	\$ 128.25	\$ 104.10	\$ 133.90	\$ 111.03	\$ 186.07	\$ 138.01
3600	\$ 109.93	\$ 89.23	\$ 114.77	\$ 95.17	\$ 159.49	\$ 118.30
3000	\$ 91.60	\$ 74.36	\$ 95.64	\$ 79.30	\$ 132.91	\$ 98.58
2400	\$ 73.28	\$ 59.49	\$ 76.51	\$ 63.44	\$ 106.33	\$ 78.86
2100	\$ 64.12	\$ 52.05	\$ 66.95	\$ 55.51	\$ 93.04	\$ 69.01
1800	\$ 54.96	\$ 44.61	\$ 57.39	\$ 47.58	\$ 79.75	\$ 59.15
1200	\$ 36.66	\$ 29.76	\$ 38.27	\$ 31.74	\$ 53.19	\$ 39.45
900	\$ 26.80	\$ 21.75	\$ 27.98	\$ 23.20	\$ 38.88	\$ 28.84
600	\$ 18.05	\$ 14.65	\$ 18.85	\$ 15.63	\$ 26.19	\$ 19.43
400	\$ 11.78	\$ 9.56	\$ 12.30	\$ 10.20	\$ 17.09	\$ 12.68
300	\$ 8.95	\$ 7.26	\$ 9.34	\$ 7.75	\$ 12.99	\$ 9.63
200	\$ 6.27	\$ 5.09	\$ 6.55	\$ 5.43	\$ 9.10	\$ 6.75
100	\$ 3.59	\$ 2.91	\$ 3.75	\$ 3.11	\$ 5.21	\$ 3.86
50	\$ 2.22	\$ 1.81	\$ 2.32	\$ 1.93	\$ 3.23	\$ 2.39
25	\$ 1.47	\$ 1.19	\$ 1.53	\$ 1.27	\$ 2.13	\$ 1.58
12	\$ 1.47	\$ 1.19	\$ 1.53	\$ 1.27	\$ 2.13	\$ 1.58
6	\$ 1.47	\$ 1.19	\$ 1.53	\$ 1.27	\$ 2.13	\$ 1.58

BURIED COPPER
24 GAUGE

4200	\$ 87.69	\$ 82.28	\$ 90.28	\$ 85.11	\$ 106.84	\$ 89.99
3600	\$ 75.17	\$ 70.53	\$ 77.38	\$ 72.95	\$ 91.58	\$ 77.14
3000	\$ 62.64	\$ 58.77	\$ 64.49	\$ 60.79	\$ 76.32	\$ 64.28
2400	\$ 50.11	\$ 47.02	\$ 51.59	\$ 48.63	\$ 61.05	\$ 51.43
2100	\$ 43.85	\$ 41.14	\$ 45.14	\$ 42.55	\$ 53.42	\$ 45.00
1800	\$ 37.58	\$ 35.26	\$ 38.69	\$ 36.47	\$ 45.79	\$ 38.57
1200	\$ 25.05	\$ 23.50	\$ 25.78	\$ 24.31	\$ 30.51	\$ 25.70
900	\$ 18.82	\$ 17.66	\$ 19.38	\$ 18.27	\$ 22.93	\$ 19.32
600	\$ 12.63	\$ 11.85	\$ 13.01	\$ 12.26	\$ 15.39	\$ 12.96
400	\$ 8.67	\$ 8.14	\$ 8.93	\$ 8.42	\$ 10.57	\$ 8.90
300	\$ 5.88	\$ 5.51	\$ 6.05	\$ 5.70	\$ 7.16	\$ 6.03
200	\$ 4.49	\$ 4.22	\$ 4.63	\$ 4.36	\$ 5.47	\$ 4.61
100	\$ 2.36	\$ 2.21	\$ 2.43	\$ 2.29	\$ 2.87	\$ 2.42
50	\$ 1.29	\$ 1.21	\$ 1.33	\$ 1.25	\$ 1.57	\$ 1.32
25	\$ 0.91	\$ 0.86	\$ 0.94	\$ 0.88	\$ 1.11	\$ 0.94
12	\$ 0.91	\$ 0.86	\$ 0.94	\$ 0.88	\$ 1.11	\$ 0.94
6	\$ 0.91	\$ 0.86	\$ 0.94	\$ 0.88	\$ 1.11	\$ 0.94

UNDERGROUND COPPER
24 GAUGE

4200	\$ 68.45	\$ 112.19	\$ 83.00	\$ 76.51	\$ 82.61	\$ 69.82
3600	\$ 58.67	\$ 96.16	\$ 71.15	\$ 65.58	\$ 70.81	\$ 59.85
3000	\$ 48.89	\$ 80.14	\$ 59.29	\$ 54.65	\$ 59.01	\$ 49.87
2400	\$ 48.06	\$ 78.77	\$ 58.28	\$ 53.72	\$ 58.00	\$ 49.03
2100	\$ 46.05	\$ 75.48	\$ 55.84	\$ 51.47	\$ 55.58	\$ 46.97
1800	\$ 37.34	\$ 61.21	\$ 45.29	\$ 41.74	\$ 45.07	\$ 38.10
1200	\$ 24.93	\$ 40.86	\$ 30.23	\$ 27.87	\$ 30.09	\$ 25.43
900	\$ 20.08	\$ 32.91	\$ 24.35	\$ 22.44	\$ 24.23	\$ 20.48
600	\$ 14.70	\$ 24.10	\$ 17.83	\$ 16.43	\$ 17.74	\$ 15.00
400	\$ 8.95	\$ 14.66	\$ 10.85	\$ 10.00	\$ 10.80	\$ 9.13
300	\$ 7.14	\$ 11.71	\$ 8.66	\$ 7.98	\$ 8.62	\$ 7.29
200	\$ 4.76	\$ 7.81	\$ 5.77	\$ 5.32	\$ 5.75	\$ 4.86
100	\$ 2.38	\$ 3.90	\$ 2.89	\$ 2.66	\$ 2.87	\$ 2.43
50	\$ 1.19	\$ 1.95	\$ 1.44	\$ 1.33	\$ 1.44	\$ 1.21
25	\$ 0.60	\$ 0.98	\$ 0.72	\$ 0.67	\$ 0.72	\$ 0.61
12	\$ 0.60	\$ 0.98	\$ 0.72	\$ 0.67	\$ 0.72	\$ 0.61
6	\$ 0.60	\$ 0.98	\$ 0.72	\$ 0.67	\$ 0.72	\$ 0.61

AERIAL COPPER
26 GAUGE - Installed Cost

Size	AL	KY	MS	TN	FL	GA
4200	\$ 89.21	\$ 72.38	\$ 93.02	\$ 76.54	\$ 128.83	\$ 96.03
3600	\$ 76.47	\$ 62.04	\$ 79.73	\$ 65.60	\$ 110.42	\$ 82.31
3000	\$ 63.72	\$ 51.70	\$ 66.44	\$ 54.67	\$ 92.02	\$ 68.59
2400	\$ 55.03	\$ 44.64	\$ 57.37	\$ 47.21	\$ 79.46	\$ 59.23
2100	\$ 48.15	\$ 39.06	\$ 50.20	\$ 41.31	\$ 69.53	\$ 51.83
1800	\$ 40.62	\$ 32.95	\$ 42.35	\$ 34.85	\$ 58.66	\$ 43.72
1200	\$ 27.27	\$ 22.12	\$ 28.43	\$ 23.39	\$ 39.38	\$ 29.35
900	\$ 20.37	\$ 16.52	\$ 21.23	\$ 17.47	\$ 29.41	\$ 21.92
600	\$ 13.81	\$ 11.20	\$ 14.39	\$ 11.84	\$ 19.94	\$ 14.86
400	\$ 9.18	\$ 7.45	\$ 9.58	\$ 7.88	\$ 13.26	\$ 9.89
300	\$ 7.42	\$ 6.02	\$ 7.73	\$ 6.36	\$ 10.71	\$ 7.98
200	\$ 5.36	\$ 4.35	\$ 5.59	\$ 4.60	\$ 7.74	\$ 5.77
100	\$ 3.25	\$ 2.64	\$ 3.39	\$ 2.79	\$ 4.70	\$ 3.50
50	\$ 2.17	\$ 1.76	\$ 2.26	\$ 1.86	\$ 3.13	\$ 2.33
25	\$ 1.54	\$ 1.25	\$ 1.61	\$ 1.32	\$ 2.22	\$ 1.66
12	\$ 1.54	\$ 1.25	\$ 1.61	\$ 1.32	\$ 2.22	\$ 1.66
6	\$ 1.54	\$ 1.25	\$ 1.61	\$ 1.32	\$ 2.22	\$ 1.66

BURIED COPPER
26 GAUGE

4200	\$ 70.81	\$ 66.67	\$ 73.12	\$ 70.19	\$ 85.58	\$ 73.33
3600	\$ 60.70	\$ 57.15	\$ 62.67	\$ 60.16	\$ 73.36	\$ 62.85
3000	\$ 52.24	\$ 49.18	\$ 53.94	\$ 51.77	\$ 63.13	\$ 54.09
2400	\$ 40.47	\$ 38.10	\$ 41.78	\$ 40.11	\$ 48.90	\$ 41.90
2100	\$ 34.89	\$ 32.85	\$ 36.03	\$ 34.58	\$ 42.17	\$ 36.13
1800	\$ 30.05	\$ 28.30	\$ 31.03	\$ 29.79	\$ 36.32	\$ 31.12
1200	\$ 19.92	\$ 18.75	\$ 20.57	\$ 19.74	\$ 24.07	\$ 20.63
900	\$ 14.94	\$ 14.07	\$ 15.43	\$ 14.81	\$ 18.05	\$ 15.47
600	\$ 10.17	\$ 9.57	\$ 10.50	\$ 10.08	\$ 12.29	\$ 10.53
400	\$ 7.21	\$ 6.79	\$ 7.44	\$ 7.14	\$ 8.71	\$ 7.46
300	\$ 5.22	\$ 4.92	\$ 5.39	\$ 5.18	\$ 6.31	\$ 5.41
200	\$ 3.62	\$ 3.41	\$ 3.74	\$ 3.59	\$ 4.38	\$ 3.75
100	\$ 1.95	\$ 1.84	\$ 2.01	\$ 1.93	\$ 2.36	\$ 2.02
50	\$ 1.11	\$ 1.05	\$ 1.15	\$ 1.10	\$ 1.35	\$ 1.15
25	\$ 0.94	\$ 0.89	\$ 0.97	\$ 0.93	\$ 1.14	\$ 0.97
12	\$ 0.94	\$ 0.89	\$ 0.97	\$ 0.93	\$ 1.14	\$ 0.97
6	\$ 0.94	\$ 0.89	\$ 0.97	\$ 0.93	\$ 1.14	\$ 0.97

UNDERGROUND COPPER
26 GAUGE

4200	\$ 84.61	\$ 75.94	\$ 101.41	\$ 96.39	\$ 101.62	\$ 88.54
3600	\$ 72.53	\$ 65.09	\$ 86.92	\$ 82.62	\$ 87.11	\$ 75.89
3000	\$ 60.74	\$ 54.51	\$ 72.79	\$ 69.19	\$ 72.95	\$ 63.55
2400	\$ 38.35	\$ 34.42	\$ 45.96	\$ 43.69	\$ 46.06	\$ 40.13
2100	\$ 33.25	\$ 29.84	\$ 39.85	\$ 37.88	\$ 39.93	\$ 34.79
1800	\$ 28.53	\$ 25.61	\$ 34.19	\$ 32.50	\$ 34.27	\$ 29.85
1200	\$ 19.72	\$ 17.69	\$ 23.63	\$ 22.46	\$ 23.68	\$ 20.63
900	\$ 15.23	\$ 13.67	\$ 18.26	\$ 17.35	\$ 18.29	\$ 15.94
600	\$ 12.26	\$ 11.00	\$ 14.69	\$ 13.96	\$ 14.72	\$ 12.82
400	\$ 9.97	\$ 8.95	\$ 11.95	\$ 11.36	\$ 11.98	\$ 10.44
300	\$ 7.96	\$ 7.15	\$ 9.54	\$ 9.07	\$ 9.57	\$ 8.33
200	\$ 5.31	\$ 4.76	\$ 6.36	\$ 6.05	\$ 6.38	\$ 5.56
100	\$ 2.65	\$ 2.38	\$ 3.18	\$ 3.02	\$ 3.19	\$ 2.78
50	\$ 1.33	\$ 1.19	\$ 1.59	\$ 1.51	\$ 1.59	\$ 1.39
25	\$ 0.66	\$ 0.60	\$ 0.80	\$ 0.76	\$ 0.80	\$ 0.69
12	\$ 0.66	\$ 0.60	\$ 0.80	\$ 0.76	\$ 0.80	\$ 0.69
6	\$ 0.66	\$ 0.60	\$ 0.80	\$ 0.76	\$ 0.80	\$ 0.69